

**Comments of IPT International Power Technology, Inc. (IPT) and Planergy International into the CEC Docket Number: 99-DIST-GEN-2 for the development of draft Policy and Process regarding the Promotion of Distributed Energy Resources as a Vital Component of the State's Energy Strategy**

On February 5, 2002, the Siting Committee held a workshop regarding a proposed Energy Commission Strategic Plan for distributed generation.

IPT and Planergy International wish to be recognized as parties in this docket and as such are forwarding the following comments to help focus the direction of the document. We are forwarding these as electronic comments and sending them to [stomashe@energy.state.ca.us] c/o California Energy Commission., Docket Unit, 1516 Ninth Street, MS-4, and Sacramento, CA 95814.

Sincerely,

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**International Power**  
*Technology*



### Background

The firm of IPT has a 25 year history in California energy business and operates three qualifying facility power plants in northern California. Two of these plants, San Jose State University in San Jose, California and SRI International in Menlo Park, California were developed under policy guidance of the State of California's vision for promoting energy diversity, efficiency and public/private investments. These plants have saved many millions of utility dollars for their owners who are both public and private institutions. During times of electricity short-falls, these plants have contributed to the reliability of power availability for all users.

IPT and our business partner, Planergy International, are prepared to accelerate their business plan to provide products and services to end users whose needs are a good economic and technical fit with distributed generation solutions. We have experience facilitating the successful deployment of highly efficient and environmentally responsible distributed energy resources into a competitive energy market. As advocates for the appropriate use of distributed generation, both IPT and Planergy believe that there are multiple benefits in the advancement of these applications.

### Introduction

We strongly endorse the proposed CEC outline and timeline to accomplish a State-wide strategy for Distributed Generation. It will fill a significant need in the current state of California energy affairs. Our comments are provided in two forms: I) Four Key Program Issues and II) Suggested Outline, language for further framing the development of the policy.

#### I) Four Key Program Issues

1. Combined Heat and Power and Gas Turbines. The development of this policy must address and include Combined Heat and Power and Gas Turbines (in the range of 1 to 30 MW).
2. Threat of Exit Fees. A cloud of uncertainty facing distributed generation is the threat of exit fees. The CPUC is the venue where the utilities have recently filed for fees for "departing load". The CEC in contemplating policies to encourage Distributed Generation must be cognizant and address such policy conflicts. Policy setting must occur at a level within government such that these two agencies coordinate effectively on these issues. Distributed generation will provide beneficial contributions to the grid and to end-users on a significant scale only if these two agencies coordinate on these issues and provide positive market signal for business development.
3. Emissions Credits. We are certain that simplified procedures can be created such that there are no added detrimental impacts to the environment. The policy should assist in simplifying the current institutional barriers

surrounding the requirements for meeting EPA and local air district BACT requirements and emissions offsets. The current process of highest bidder in needs to be reviewed so that there is more certainty and fewer transactional costs. The current offset markets are extremely inefficient and offset costs can add hundreds of thousands of dollars in total project cost. Procedures require substantial staff work which adds costs to every project. Additionally, there are conflicting requirements between the local air districts and the federal EPA. These off-sets must be organized in manner that simplifies the process.

4. Loss of Qualifying Facility contracts and imposition of new fees. Utilities and the CPUC have suspended the Standard Offer One contracts which require the utilities to buy QF power at the “avoided cost” rate. Distributed Generators, who are Standard Offer One (SO1) contractors, have had to negotiate purchase agreements with the ISO and install expensive ISO metering equipment. Now they also face the imposition of additional costs proposed by the ISO of behind meter additional costs for gross metering.

There is need to re-address the Public Utility Regulatory Policy Act (PURPA), the part of the 1978 National Energy Act, that mandated that electric utilities buy electric power from qualifying non-utility generators, such as commercial and large industrial customer that generate their own electric power. The Federal Energy Regulatory Commission (FERC) drafted the regulations implemented by State regulatory authorities. Under the FERC regulations, the rate paid for this power reflects costs the utility avoids by not having to generate the power itself. This “avoided cost” rate has been more or less than the retail rate. Projects such as ours were developed under this regulatory frame. We believe the essential concept of avoided cost is still valid and should be re-instated in a manner that is consistent with upcoming market design and regulations.

The current climate of uncertainty associated with QF (Qualifying Facility contracts) makes business operations for firms now in the distributed generation business problematic. Suspension of these avoided cost contracts has resulted in these resources having to bid daily into the ISO thereby resulting in the preparation and staff support of costly documentation required for daily balancing. Transaction costs of these requirements are unfair to those operating distributed generation from 1 to 30 MW’s.

## II) Suggested Language

The CEC outline of “Promotion of Distributed Energy Resources as a Vital Component of the State’s Energy Strategy” contains topics which are of particular importance to IPT and Planergy. The absence of language in the Comment column, below, indicates general agreement/no comment.

Our points below are presented in the order in which they are contained in the CEC Draft Outline, Strategic Plan for Distributed Generation.

CEC Draft Outline	IPT and Planergy Comments
I. Purpose and Scope of Distributed Generation Strategic Plan	
II.	
A. Articulate the Energy Commission's vision of the future relating to distributed generation.	
B. Identify issues and opportunities affecting the likelihood of the vision being realized.	
C. Recommend policies and strategies that will address the issues and opportunities that will make the Energy Commission's vision a reality.	
D. Provide guidance to other state agencies about policies and strategies within their respective jurisdictions that would contribute to realizing the vision.	
II. Vision, Mission and Principles	
<p>Vision Statement</p> <p>Distributed generation will be an integral part of the California energy system, providing consumers and energy providers with affordable, clean, reliable, and readily accessible energy services.</p> <p>Mission Statement</p> <p>It is the mission of the Energy Commission to develop programs and policies that will effectively promote and deploy distributed generation technologies that benefit energy consumers and the electricity grid in California.</p> <p>Principles</p> <p>Deploy distributed generation only in a way that preserves and enhances the environment in which people live.</p>	<p>Add reference to mitigation for the need for additional of otherwise unnecessary environmentally intrusive and costly transmission and distribution infrastructure.</p>

<p>Recognize the need for private investment. Without private investment, a self-sufficient distributed generation industry will never develop.</p> <p>Provide consumers more choices about how to meet their energy needs, including opportunities to gain more control over energy use and expense.</p> <p>III. DG Overview: Technologies and Markets</p>	<p>This Principle should reflect that private investment in a competitive market has need for regulatory certainty</p>
A. Definition	
<p>Distributed generation has been defined in many ways, creating some confusion in terms of rule applicability. It is generally defined as the generation of electricity near the intended place of use. Some parties define it with size limitations, others exclude backup generation, and yet others make no distinction between generation connected to the transmission system and generation connected to the distribution system. The Strategic Plan will assume the following definition, consistent with the CPUC's definition identified in its DG roadmap decision:</p>	
<p>Distributed generation is "small scale electric generating technologies such as internal combustion engines, micro turbines, wind turbines, photovoltaic, and fuel cells." CPUC Decision 99-10-065, September 1999.</p>	<p>The definition needs to include gas turbines and CHP technologies.</p>
B. Technology Overview	
<p>This section will provide a brief description of each technology classified as distributed generation. Technologies to be addressed include but are not limited to:</p>	

Photovoltaic and Other Solar Electric Technologies Wind Turbines Fuel Cells Micro turbines and Small Gas Turbines Stirling Engines Reciprocating Engines Miscellaneous Storage Technologies	Gas turbines and Combined Heat and Power require separate sections.
C. Status of DG in California	
1. Installations	
Distributed generation is not new to California nor is it insignificant in terms of its impact. In California, more than 1,000 generating facilities sized between 100 kilowatts and 20 megawatts produce electricity, representing more than 3,200 MW or six percent of the State's 1999 peak. Many of the generators are technologically grouped as internal combustion based, with individual units often producing in excess of one megawatt. Include units smaller than 100 kilowatts such as microturbines, photovoltaics, and other renewable technologies, and the estimate increases further. This section will describe where distributed generation is located throughout California, disaggregated by utility service territory and technology where available.	Assess business models that characterize conditions under which DG investment is made. Findings from the AD Little study for the CEC on Distributed Resources define the market types. "Business models" should be highlighted. There are those that work and those that don't. IPT and Planergy are prepared to discuss both types of models.
2. DG Enterprises	
This section will address the status of DG businesses in California, including the number of manufacturers and DG-related service providers.	IPT/Planergy would like to highlight our available services here.
IV. Deployment Issues and Opportunities	
This section will identify the major barriers hindering the deployment of distributed generation in California. The issues listed in this outline are not all-inclusive. Although listed below, it is not the intent of the Plan to address each issue individually. These issues will be prioritized and addressed to the extent possible. It should be noted that many of the issues were conceived as part of the Energy Commission's PIER Research Assessment work performed last year under the direction of the Energy Systems Integration program.	
A. Interconnection Issues	

· Can interconnection rules be standardized throughout California?	·
· Should California support development of national interconnection standards?	·
· Can interconnection be made more user-friendly to the end-use consumer?	·
· Can a substantial amount of DG be interconnected in both radial and networked distribution systems?	·
· Are there safe, reliable and cost-effective interconnection solutions for radial and networked distribution systems?	·
· Can interconnection solutions be deployed in a timely manner?	·
· Is a single DG unit compatible with end-use equipment or other DG equipment?	·
<b>B. Environmental Issues</b>	
· Should the state give preference to "clean" DG technologies?	Assess use of a tiered system so that preferences, if adopted, are not exclusive. CEQA review and permit streamlining should be a goal. Reference December 2000, CEC Document titled "Distributed Generation: CEQA Review and Permit Streamlining".
· Can air emissions from DG become as clean as central station power plants by 2007?	Offset requirements should be based "in part" on avoided central power station emissions and not solely on BACT
· Can air emissions from diesel backup generators become as clean as natural gas-fired generators?	·
<b>C. Grid Effects Issues</b>	
	Address systems benefits from

	optimal siting of DG.
	Assess grid charges with respect to the CEC policy objectives, reasonableness and for prioritization for input. Grid related charges of concern include Stand-by fees, Special Services Charges, ISO Gross (and Proposed NET ) metering charges, Proposed Exit Fees.
	Ad hoc assaults on the future of DG include the current exit fee debate. Evaluate “Departing load” and related system impacts from perspective which envisions a functioning DG market. Recently both PG&E and SCE filed departing load charges with the CPUC; while these have been withdrawn, this reminds some of the era of “QF-Bashing” and the CEC should be the leader in pro-active assessment of these matters
· Would a high penetration of DG have a beneficial/detrimental impact on the T&D system?	Studies should be performed to quantify positive and negative impacts of DG.
· Is there a limit to the level of DG that the grid can absorb without adverse impacts?	·
· Are there any limitations on bi-directional power?	·
· Should distribution design philosophy and design tools be modified to accommodate DG?	·
· Can engineering studies be eliminated, standardized, or streamlined?	Address the possible use of independent 3 <sup>rd</sup> parties to resolve issues.
· Can microgrids be effectively utilized?	·
D. Market Integration and Regulatory Issues	



	Address "Customer Choice" to deploy DG in the electric market.
<ul style="list-style-type: none"> <li>Can market rules be modified to allow DG to better participate in current markets?</li> </ul>	Study requirements of the utilities to continue to purchase QF power under "Standard Offer Contracts" such as the "As -Available"SO1. Without Standard Offer contracts, the QF's are forced to enter into contracts with the ISO and to install very expensive ISO metering. Additionally, small DG producers are forced to manage power deliveries the way very large generators do which is a very costly labor proposition for the small generator.
<ul style="list-style-type: none"> <li>Can transaction costs associated with interconnecting and permitting be reduced?</li> </ul>	.
<ul style="list-style-type: none"> <li>Is it in the State's interest to promote DG?</li> </ul>	Address the multiplicity of CPUC roles with respect to DG is important—setting rates and adopting rules which affect the DG market and implementing incentive program to promote its use. .
<ul style="list-style-type: none"> <li>How can tariffs and rate be designed to provide better price transparency to DG?</li> </ul>	.
<ul style="list-style-type: none"> <li>Are there too many public subsidies being provided for DG?</li> </ul>	.
<ul style="list-style-type: none"> <li>Should a separate market structure be created for the full range of DG technologies (i.e., DG aggregation, DG Power Exchange, etc.)?</li> </ul>	.
<ul style="list-style-type: none"> <li>Should regulatory rules be changed to support the development of microgrids?</li> </ul>	.
<ul style="list-style-type: none"> <li>Does the suspension of direct access impact the marketability of</li> </ul>	DG is not Direct Access. The simple answer is that the two should be dealt with, from a

DG?	regulatory aspect , as being independent of each other and the rules, regulations, and tariffs should be decoupled and each should be addressed under separate proceedings
· Does the imposition of "exit fees" impact the marketability of DG?	Yes – see opening remarks
· Should standards for control/communications be developed to better enable DG to participate in markets?	.
· Should the DG market paradigm shift towards decentralized rather than centralized control?	Yes
	<p>Economic issues require a section in the strategy.</p> <p>For many end-users, especially large manufacturing firms, economic benefits of energy choice under DG is the difference between locating and doing business in California or not.</p>
V. Potential Role of Government in Addressing Issues and Opportunities	
A. Overview of Potential Roles	
· Plan/Coordinate	CEC forecasts should assess supply and demand attributed to the DG sources.
· Purchase	.
· Incent	.
· Regulate	.
·	Address regulatory environment that protects rate-payers and creditors and that provides rates and tariffs so that DG makes resource contributions.

· Educate	·
· Be Entrepreneurial	·
B. Distinguishing Between Federal and State Government Roles C. Role of State Agencies D. Role of Local Governments	The CEC should coordinate with the CPUC for developing DER in utility resource plans (for their implementation, and to recognize customer implementation).
VI. Guidance to Other State Agencies	
While it is clear that the Energy Commission does not have jurisdictional authority over other state agencies involved in distributed generation, a myriad of advantages are available to the state with a coordinated effort. This section attempts to identify those areas, which will include input based on discussions between Energy Commission staff and representatives from other state agencies. Agencies the Energy Commission seeks to consult include but are not limited to the following:	The CEC, with input from the DG stake-holders, should collaborate with the CPUC in DER elements in utility resource plans.
California Air Resources Board California Public Utilities Commission California Consumer Power and Financial Authority Department of General Services Employment Development Department State Treasurer's Office (other financial authorities)	
VII. Strategy Options and Goals for the Energy Commission	
This section represents the heart of the Energy Commission strategic plan, outlining the general strategies and goals for the near-term, mid-term, and long-term.	
A. General Strategies	
1. Leadership Opportunities	
	This section requires a serious look at the competing priorities facing the State's energy future: Examine the role of Long Term contracts for opportunities and reserves to ensure customer choice for DG is not preempted.
Technical and Policy Analyses R&D Funding Renewables Funding	

Building Standards Information Source Coordinate Activities Across State Agencies	
2. Collaboration Opportunities	
Work with CPUC on regulatory issues and policy development Work with CPA on financing arrangements Co-fund with DOE and other entities to optimize research efforts.	Work with local governments, to assess land use regulations and general plans, approval process and governance authorities for promoting increased market entry of DG and siting to optimize grid performance.
B. Goals and Strategies	
Long-term (Beyond 10 Years):	
Make California's energy generation and delivery system the cleanest, most efficient, reliable, and affordable in the nation by maximizing appropriate use of distributed generation.	Add: "low impact"
Mid-term (5-10 Years):	
Reduce distributed generation equipment costs to a level that would obviate the need to provide government incentives to deploy distributed generation.	
	Assess potential for increased security of California energy system by deployment of DG networked with useful redundancy, and multiple small scale generators serving near-by users complementing base load large power plants and its T&D system.
Enhance the emissions and efficiency profiles of distributed generation technologies such that the economics and permitting support wide-scale deployment.	
Near-term (3-5 Years):	
	Support efforts for regulatory certainty as the climate for DG including opposing costs which

	unfairly penalize DG.
Fund research programs that will assist in the development and deployment of distributed generation technologies.	
Undertake a series of analyses to determine market, technological, and regional potential for distributed generation in California.	Evaluate system benefits from serving load from DG and the means to create this outcome.
Address institutional and regulatory issues that interfere with purchasing, installation, and operation of distributed generation facilities.	
Provide incentives that encourage the deployment of distributed generation, with additional incentives afforded to "environmentally preferred" technologies.	
Establish a DG State Agency Coordination Group to cooperatively address distributed generation issues and ensure consistent handling of these issues throughout state government.	
Raise consumer awareness about distributed generation.	
	Assess non-utility incentives to promote investments in DG and in the optimal siting of DER such that system benefits are realized.

### Closing

We appreciate the leadership demonstrated by Commissioner Robert Laurie and Commissioner Robert Pernell, and their respective staff, in the establishment and conduct of this proceeding, and affirm our willingness to participate in the development of policies that will allow for the market development of distributed generation.

Dated: March 13, 2002  
Rita Norton & Associates, LLC